

Remarks

New claim 13

New claim 13 adds the limitation,

the additional type of action is defined by a user of the policy enforcement system; and
the policy enforcement system includes a user interface for extending the policy database by adding the user-defined additional type of action thereto.

The user interface is described in detail beginning at page 93, line 20 and shown in FIGs. 31-37. As pointed out at page 91, lines 12-15, “the general techniques described above for defining new kinds of attributes may be employed elsewhere in policy database 2901 to define new actions, new ways of identifying users, and new types of resources.”

The rejections of claims 8-12 under 35 U.S.C. 101

Applicants have amended independent claims 8 and 10 to specifically point out what is clear from FIG. 27 and the discussion of the figure beginning at page 81, line 21, namely that the claimed policy database “is implemented in a data storage device that is accessible to a processor”, the processor appearing as policy server 2617 in FIG. 27 and the data storage device appearing as policy server database 2619 in the figure. The claims as amended further specifically point out the interaction between policy server database 2619 and policy server 2617. The claims as amended are thus addressed to a component of a system that is implemented using a processor and a storage device accessible thereto and are therefore addressed to patentable subject matter. As is apparent from FIG. 27, the amendments only make explicit what was implied in the claims as filed and consequently do not materially change the scope of the claims as filed. Because the amendment overcomes the rejection with regard to the independent claims, it also overcomes the rejection with regard to the dependent claims.

Traversal of the rejection under 35 U.S.C. 112, first paragraph

In his rejection of claims 8-12 under 35 U.S.C. 112, first paragraph, Examiner confuses the requirements of 35 U.S.C. 101 with those of 35 U.S.C. 112, first paragraph. The issue in 35 U.S.C. 112, first paragraph is solely whether

The specification [contains] a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention. (35 U.S.C. 112, first paragraph)

In this case, what is claimed in independent claims 8 and 10 in the application as filed is “a policy database wherein policies are defined in terms of sets of first entities, sets of second entities, and actions”. Applicants’ Specification explains how to make and use such a policy database in 98 pages of text and 37 Figures, of which 20 pages, beginning at page 79, and 11 figures, beginning with FIG. 26, are devoted to the particular new features which are the subject matter of claims 8 and 10. Applicants’ attorney believes that no serious person “skilled in the art to which [Applicant’s invention] pertains” would maintain that Applicants’ specification does not fulfill the requirements of 35 U.S.C. 112, first paragraph. Applicants’ attorney is strengthened in this belief by the fact that the greater portion of the present Application’s Specification is shared with 5 other patent applications, four of which have been issued and one of which is still in prosecution, and this is the first time in all of these prosecutions that any examiner has raised the issue of lack of support under 35 U.S.C. 112.

The rejection under 35 U.S.C. 112, second paragraph

35 U.S.C. 112, second paragraph, requires that Applicants’ claims

particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.

Applicants’ language with regard to his “sets of first entities” and “sets of second entities” is to be sure broad, but 35 U.S.C. 112, second paragraph, is not directed against broad claim language, but only against indefinite claim language. Applicants’ claim language is not indefinite. It particularly points out that the sets of first entities, the sets of second entities, and the policies are related in that “a given policy defin[es] a given action which an entity belonging to a given set of the first entities may perform on an entity belonging to a given set of the second entities”. Since the only relationships between the sets of entities and the actions which are of importance to the claim are those

produced by the policies, there is no need for a more precise definition of what the entities are, particularly where, as set forth at page 85, lines 16-25 of Applicants' Specification,

Continuing in more detail with generalized policy syntax 2801, *Entity* represents a user group whose members are defined by one of the techniques employed in access filter 203 or by a technique defined by an administrator of policy server 2617; The only requirement for the entity is that it be recognizable by policy enforcer 2609. *Action* represents an action which may simply be access as in access filter 203 or an action defined by an administrator of policy server 2617; the only requirement for the action is that policy enforcer 2609 be able to cause the action to be performed on a resource. *Resource* represents an information set. In the generalized policy server, however, an information set may be a set of devices such as a printers or file servers. The only requirement for a resource is that policy enforcer 2609 be able to cause the action to be performed on the resource.

The objection to claims 5-7 as being in improper form

Applicants have amended these claims so that they are properly multiply dependent from claims 1-4 and new claim 13.

The rejection of claims 1-13 under 35 U.S.C. 102

The rejection of claim 1

A rejection of a claim under 35 U.S.C. 102 requires that every limitation of the claim be disclosed in the reference which forms the basis of the rejection, see MPEP 2131. Claim 1 is an improvement claim; in such claims, the limitations of the claim's preamble are limitations of the claims as a whole. See *Chisum on Patents* 8.06[1][d] and the cases discussed there. In the case of claim 1, the limitations of the preamble include "a policy server including a policy database of the policies" and "a policy enforcer . . . the policy enforcer permitting performance of the action only if a response from the policy server indicates that the policies permit the action."

Examiner finds all of the limitations of Applicants' claim 1 in Jarvis. What Jarvis discloses is well summarized in the patent's *Abstract*:

A policy-driven network traffic manager recommends to individual application programs that generate network traffic whether, and optionally under what conditions, they should generate network traffic. The network traffic manager has an interface, through which the application programs, prior to generating network traffic, call the network traffic manager and describe the traffic the application programs propose to generate. A policy repository stores a set of policies, which the network traffic manager uses to ascertain whether the application programs should generate the proposed network traffic. The policies can include considerations such as time, link cost, latency, congestion and availability. The network traffic manager then sends the recommendations to the application programs.

At the highest level, the problem with Jarvis as a reference is that it does not disclose

a policy *enforcement* system for *enforcing* policies defining what actions belonging to a first type thereof first entities defined in a computer system may perform on second entities defined in the computer system (claim 1, lines 1-3, emphasis added)

Instead, it discloses “a policy-driven network traffic manager” that *recommends* (emphasis added) to individual application programs that generate network traffic whether, and optionally under what conditions, they should generate network traffic”.

As one would expect from the fact that Jarvis “recommends” whether individual application programs should generate network traffic, there is nothing in Jarvis that corresponds to the policy enforcer of Applicants’ claim 1, which

controls performance of the first type of action and is capable of communicating a request to perform an action of the first type to the policy server, the policy enforcer permitting performance of the action only if a response from the policy server indicates that the policies permit the action

In his rejection, Examiner takes policy editor 209 (Fig. 2) to be Applicants’ policy enforcer and refers Applicants to col. 5, line 1-col.6, line 12. The only disclosure concerning policy editor 209 in that portion of Jarvis, and indeed in all of Jarvis, is found at col. 5, lines 63-66:

The ability to augment and change the policies through the policy editor 209, together with the interpretation of the policies by the server 204, makes the policies easily extendible.

FIG. 2 further shows policy editor 209 communicating only with policy repository 206, not with server 204 or clients 200, and col. 5, lines 53-66 confirms what would be expected by that arrangement, namely that policy editor 209 is used to augment and edit policies. That being the case, it cannot and does not control performance of anything, does not communicate requests to the policy server, and does not permit performance of an action only if a response from the policy server indicates that the policies permit the action. That policy editor 209 does none of these things may further be immediately seen from its complete absence in the flowchart of FIGs. 4A and 4B, which sets forth the process by which Jarvis' server 204 provides a suggestion 214 to a client 200. Policy editor 209 is therefore clearly not Applicants' policy enforcer, and since that is the case, Jarvis does not anticipate Applicants' claim 1.

Patentability of the claims that are dependent from claim 1

Because Jarvis does not anticipate claim 1, it also cannot anticipate any of the claims dependent therefrom. In addition, however, Jarvis does not disclose the added limitations of these claims. With regard to claims 5-7, the added limitations of these claims are limitations that involve the policy enforcer; since there is no policy enforcer in Jarvis, it cannot disclose these limitations. With regard to dependent claim 2, among the added limitations is the following:

the policy database is of the class wherein policies are defined in terms of sets of the first entities and sets of the second entities (lines 2-3)

There is simply no indication whatever in Jarvis that Jarvis' clients 200 are divided into sets of clients and his traffic types are divided into sets of traffic types or that his policies are defined in terms of sets of clients and sets of traffic types. Instead, FIG. 3 and the description of policies at col. 5, lines 25-40 indicate that the control information used by the server to make recommendations includes formulas, and as indicated at lines 37-41,

The formulas make use of factors and considerations that include, but are not limited to, source address, destination address, source LAN area, destination LAN area, link-up cost, link open cost, link packet cost, link throughput, traffic type, timetables and expected packet count.

Since Jarvis does not disclose definition of policies in terms of sets of the first entities and sets of the second entities, claim 2 is patentable over Jarvis in its own right. Claim 3 is dependent from claim 2 and is additionally patentable for that reason over Jarvis. Claim 4 adds the limitation that the database is further extensible to include an additional type of action. In Jarvis, the user can add policies for new clients and new network links (see col. 6, lines 18-24), but the possible *actions* are fixed: the server makes a recommendation to the client or the server makes a callback to a function in the client (FIG. 2, 214, 218, col. 7, lines 32-53). Jarvis therefore does not disclose the added limitation of claim 4 and the claim is patentable in its own right over the reference.

Concerning claim 13, the added limitations of this claim are

the additional type of action is defined by a user of the policy enforcement system; and
the policy enforcement system includes a user interface for extending the policy database by adding the user-defined additional type of action thereto.

As pointed out in the discussion of claim 4, Jarvis does not permit definition of additional types of actions; the added limitations of claim 13 are thus not disclosed in Jarvis and the claim is patentable in its own right over the reference.

The reference, Spencer, et al., "The Flask security architecture: System support for diverse security policies"

FIG. 1 of Spencer, et al., *The Flask security architecture: System support for diverse security policies* (henceforth "Spencer") shows a security architecture which includes both a policy enforcer and a policy server, and the reference's disclosure would thus appear to be more relevant than that of Jarvis. It is unclear what the publication date of Spencer is. Examiner lists the date of the reference as 1998 in his form PTO-892, but the paper itself is labeled *Draft, March 1999* and the bibliographical listing on the form PTO-890 indicates that the paper was intended for "usenixsec 1999", which applicants' attorney would take to mean a USENIX conference devoted to security which took place in 1999.

Applicants' application, though having a PCT filing date of June 28, 1999, claims priority from provisional application 60/091,130, filed June 29, 1998 and is a CIP of US 09/304,507, filed 3/4/98, which in turn claims priority from the provisional applications 60/039,542 and 60/040,262, both filed 3/10/97. As pointed out at page 84, lines 10-15 of Applicants' Specification, policy evaluation and policy enforcement were logically separate in the system disclosed in US 09/304,507. The tentative conclusion that Applicants' attorney draws from all of this is that Spencer is not available as a reference against Applicants' application, either because it was published after the filing date of the provisional application 60/091,130 or because it was published after the filing date of USSN 09/304,507, or because it was published after the filing dates of provisional applications 60/039,652 or 60/040,262.

Conclusion

Applicants have amended claims 8 and 12 to overcome the rejection under 35 U.S.C. 101, have amended claim 1 to make it clear that the additional policy enforcer is a limitation of the claim, have amended claims 5-7 so that they are proper multiply dependent claims, and have added a new claim 13. Applicants have demonstrated that all of the amendments are fully supported by the Specification as filed. Applicants have further traversed the rejections under 37 C.F.R. 112 and the rejections under 35 U.S.C. 102 and have thereby been fully responsive to Examiner's Office action of 10/25/04. Applicants have also brought Spencer to Examiner's attention and have pointed out why it is apparently not available as a reference.

Applicants have thereby satisfied the requirements of 37 C.F.R. 1.111(b) and respectfully request that Examiner continue with his examination, as provided by 37 C.F.R. 1.111(a). A check of \$200.00 for the four new independent claims that have been added by way of this amendment is attached. Please charge any additional fees required for this response or refund any overpayment to deposit account number 501315.

Respectfully submitted,

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